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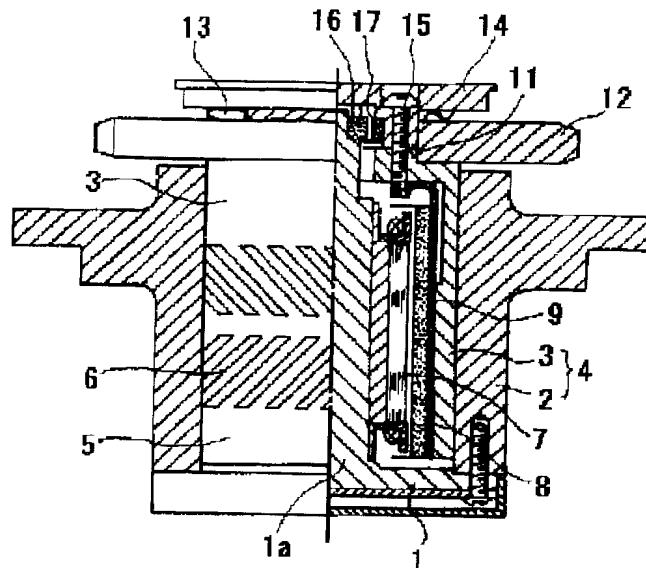
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TITLE : DYNAMIC PRESSURE BEARING
DEVICE AND MOTOR USING IT



ABSTRACT : PROBLEM TO BE SOLVED: To improve wear resistance with simple, low-cost constitution by forming a lubricating film containing amorphous carbon, in specified thickness on the dynamic pressure bearing surface of a shaft member and a bearing member.

SOLUTION: Base material of a rotor 3 is formed of metallic material such as aluminum or its alloy, and a lubricating film formed of amorphous carbon is formed in thickness of 2 μm or more on the dynamic pressure bearing surface of the outer peripheral surface of the base material. Substrate treatment of silicon oxide is applied to the surface of the base material to heighten adhesion of the lubricating film. Amorphous carbon contains amorphous diamond-like carbon. The lubricating film is provided with an extremely smooth surface of close amorphous structure without a grain boundary, but surface-finishing is further applied thereto. A bearing member 2 is provided with the same metallic base material, and the same lubricating film as the rotor 3 is formed on the inner peripheral surface through a substrate treated film. With this constitution, excellent wear resistance can be obtained at a low cost to permit long-term use for a device harsh in environment of dust or the like.

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